DOE/WIPP 01-3199
Revision 1

Recertification Project Plan

U.S. Department of Energy
Carlsbad Field Office

June 2005

This document supersedes DOE/WIPP 01-3199, Revision 0.

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Signature on File / June 2, 2005
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EXECUTIVE SUMMARY

The Waste Isolation Pilot Plant's (WIPP) Recertification Project was established to meet the WIPP Land Withdrawal Act (LWA) (Public Law 102-579, as amended by Public Law 104-201) requirement to demonstrate WIPP's continued compliance with the U.S. Environmental Protection Agency's (EPA) disposal regulations at five-year intervals. This plan sets the overall direction for a highly complex and interdependent set of tasks that is repeated every five years and culminates in the EPA issuing a certification that the WIPP facility demonstrates continued compliance with Title 40 *Code of Federal Regulations* (CFR) Part 191, "Environmental Radiation Protection Standards for the Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Wastes," pursuant to the LWA paragraphs 8(d)(1) and 8(f).

In addition, this plan establishes the institutional roles and responsibilities of WIPP project participants in the recertification effort and lays out a high-level schedule for producing a Compliance Recertification Application (CRA) at five-year intervals (beginning March 26, 2004). Woven throughout this plan are elements of guidance and direction gained from written correspondence and technical exchanges with EPA managers and staff that occurred during the first recertification.

An important premise of this plan is that the process of recertification is not subject to rulemaking or judicial review (see LWA, Section 8[f][2]). Therefore, a CRA cannot be used to introduce a change to the certification; rather a significant change requires modification of the certification through rulemaking. The CRA does include both significant and nonsignificant changes to the certification that occurred in the five-year period preceding the recertification effort, which were approved by the EPA through rulemaking (see 40 CFR §§194.65 and 194.66) or the annual change reporting process (see 40 CFR §194.4[b][4]).

The *Waste Isolation Pilot Plant Certification Management Plan* (DOE/WIPP 99-2296) specifies the proper methodology for reporting planned and unplanned changes to the EPA. The CRA will contain information that has been added or changed since the last Compliance Recertification. Compliance areas that have not changed since the submission of the Compliance Certification Application (CCA) (DOE/CAO 96-2184, *Title 40 CFR Part 191 Compliance Certification Application for the Waste Isolation Pilot Plant*) or subsequent CRAs, may be incorporated in the current CRA by reference. Similarly, appendices that have not changed from the previous CRA, will not be reprinted in the subsequent CRA, but only referenced.

This plan incorporates as appropriate, the EPA guidance to the U.S. Department of Energy (DOE) on preparing a certification application (EPA 2000). That guidance makes it clear that potentially significant changes to the WIPP disposal system must be reviewed and approved by the EPA prior to or following recertification through a regulatory change process, and may involve rulemaking.

This plan also commits the DOE to performing, as part of the CRA, an impact assessment of changes and new information made on the long-term performance of the disposal system since the submittal of the last CRA.

A critically important milestone of the Recertification Project is the production and delivery of the CRA to the EPA on or before the LWA-mandated date (every five years beginning March 26, 2004). The desired result of the Recertification Project is a decision by the EPA to recertify the repository without interruptions in disposal operations.

TABLE OF CONTENTS

LIST OF FIGURES

ABBREVIATIONS AND ACRONYMS

ACR	Annual Change Report
CA	Compliance Assessment
CARDs	Compliance Application Review Documents
CBFO	Carlsbad Field Office (DOE)
CCA	Compliance Certification Application
CFR	*Code of Federal Regulations*
CRA	Compliance Recertification Application
CREL	Compliance Recertification Electronic Library
CTAC	Carlsbad Field Office Technical Assistance Contractor
DOE	U.S. Department of Energy
EM	Environmental Management
EPA	U.S. Environmental Protection Agency
FEPs	Features, events, and processes
FR	*Federal Register*
LANL	Los Alamos National Laboratory
LWA	Land Withdrawal Act
MOC	Management and Operating Contractor
PA	Performance Assessment
PABC	Performance Assessment Baseline Calculation
PICs	Passive Institutional Controls
QA	Quality Assurance
QAPD	Quality Assurance Program Description
RRC	Recertification Response Committee
SA	Scientific Advisor
SNL	Sandia National Laboratories
TRU	Transuranic
TSDs	Technical Support Documents
WBS	Work Breakdown Structure
WIPP	Waste Isolation Pilot Plant
WRES	Washington Regulatory and Environmental Services
WTS	Washington TRU Solutions LLC

GLOSSARY

Annual Change Report (ACR) – Report submitted to the EPA by the DOE Carlsbad Field Office (CBFO) each November that outlines nonsignificant changes to the information in the Compliance Certification; satisfies criteria in 40 CFR §194.4 (b)(4). The report covers the 12-month period from July 1 to June 30.

Compliance Assessment (CA) – Used to determine the impact upon groundwater and the maximally exposed individual in the future, as required by 40 CFR §191.15, "Individual Protection Requirements"; and 40 CFR Part 191, Subpart C, "Environmental Standards for Ground Water Protection."

Compliance Application Review Documents (CARDs) – Records that outline the basis for the EPA's decision of compliance, arranged by individual topics within the 40 CFR Part 194 criteria. (See *Technical Support Documents* [TSDs].)

Compliance Certification Application (CCA) – The October 1996 submittal of information by the DOE to the EPA; written to demonstrate compliance with the disposal standards in 40 CFR Part 191, Subparts B and C. The CCA was submitted pursuant to LWA section 8(d)(1). CRAs will be submitted pursuant to LWA section 8(f).

Changes – Notifications to EPA made to report either a planned or unplanned change in activities or conditions pertaining to the disposal system that differ from the information contained in the most recent compliance application. Specific change notification requirements are defined at 40 CFR §194.4.

Compliance Baseline – The regulatory basis that began with the certification by the EPA in May 1998 ("40 CFR Part 191 Environmental Radiation Protection Standards for the Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Wastes; Final Rule," 58 *Federal Register* (FR) 66398-66416, December 20, 1993, and the EPA Final Certification Decision, 63 FR 27354-27405, May 18, 1998); essentially this is inclusive of the initial Compliance Certification, subsequent Compliance Recertifications, the CARDs, the TSDs, and responses to EPA comments.

Data Cutoff Date - Data will be gathered and used to develop the performance assessment for the application and CRA documentation. The data input and data description will be input at the last reasonable opportunity for inclusion in the CRA so as to enhance completeness.

Deputy Project Manager – Person who manages the project schedule and the production of the application as necessary to complete the project.

EPA WIPP Docket – A publicly accessible collection of documents related to the WIPP Compliance Baseline. The EPA uses this information to make regulatory determinations. The EPA WIPP dockets include A-92-56 (compliance criteria), A-93-02 (certification decision), and A-98-49 (continuing compliance).

Integrated Project Team - Consists of technical and programmatic leads with at least one representative from each of the participating WIPP organizations; the participating organizations are the CBFO, the management and operating contractor (MOC), Sandia National Laboratories (SNL), Los Alamos National Laboratory (LANL), and CBFO Technical Assistance Contractor (CTAC). Support contractors are encouraged to attend when agenda topics deal with items of importance to them. This team meets on a biweekly basis beginning near the "data cutoff date" and will be chaired by the Project Manager. This group will be responsible for updating the schedule, identifying and resolving pitfalls, and addressing other topics that may need clarification or a decision.

Modification – A formal change to the terms or conditions of the certification. A modification can only be made through a formal rulemaking process as defined at 40 CFR §194.4(b)(1) and 40 CFR §194.65.

Performance Assessment (PA) – A probabilistic analysis of the long-term performance (i.e., over a 10,000-year period) of the WIPP repository as required by Section 6(b) of the LWA; 40 CFR §§191.13, 194.32, 194.33, and 194.34.

Performance Assessment Baseline Calculation (PABC) – A confirmatory WIPP PA calculation conducted at the direction of the EPA as part of their technical review of the CRA. The PABC will use EPA-specified parameters and distributions. The PABC will become the new PA baseline, pending a recertification decision by the EPA.

Project Lead – Person within the DOE who administers the project and directs the Project Manager.

Project Manager – Person who organizes, plans, and manages activities, and acquires resources necessary to complete the project.

Project Participants – Those actively involved in planning, writing, performing, and reviewing documentation related to compliance, testing, or research to support recertification. Currently, these organizations are the CBFO, WIPP MOC; SNL; LANL; CTAC, and their supporting contractors.

Project Stakeholders – Those persons or organizations that have an interest in the regulatory compliance activities at WIPP.

Recertification Project Plan – The document used to guide project execution and control. This plan facilitates communication and documents assumptions and decisions, scope, and scheduled baselines. It also provides insight on regulatory background and processes.

Recertification Response Committee (RRC) – Consists of at least one representative of each of the project participants and is chaired by the Project Lead. The RRC shall make compliance and strategy-related recommendations for post-submittal activities. Submittal of additional information is coordinated through this committee. A more specific definition is contained in *DOE Response Plan - Resolving Requests for*

Additional Information Associated with the 2004 Compliance Recertification Application (DOE/WIPP 04-3296).

Revocation – Action taken by the Administrator of the EPA to revoke the Compliance Certification spawned by an adverse change to activities or conditions to the disposal system differing significantly from the most recent Compliance Certification. The rulemaking process is used by the EPA to reach a final decision.

Suspension – An EPA suspension of the Compliance Certification, as determined by the Administrator; requires the immediate halt of waste emplacement activities until adverse conditions have been corrected. Unlike modifications and revocations, suspensions do not require rulemaking.

Technical Support Documents – The EPA's assessment of technical and scientific adequacy for each major area of the compliance standard, arranged by individual topics within the 40 CFR Part 194 criteria, and how the DOE satisfies or does not satisfy them. (See *Compliance Application Review Documents.*)

1.0 RECERTIFICATION PROJECT

1.1 Project Mission

Develop, refine, and submit documentation demonstrating continued compliance with the regulations set forth in 40 CFR Part 191, Subparts B and C, pursuant to the criteria at 40 CFR Part 194, that will support continued recertification by the EPA, thus allowing the DOE to continue to dispose of transuranic (TRU) waste at WIPP.

1.2 Project Foundation

The requirement for site certification stems from the WIPP LWA, which was passed by Congress in 1992 and amended in 1996. This public law established the EPA as a facility regulator. From this law came the need for certification criteria as eventually published in 40 CFR Part 194. Once the Part 194 criteria were final, a certification application to demonstrate regulatory compliance was developed by the DOE and submitted to the EPA in October 1996. Issuance of the EPA certification required public rulemaking, and thus required a period in which the interested parties had a chance to comment on the information that was submitted and the regulatory process by which the EPA made a decision. On May 18, 1998, the EPA published a ruling (63 FR 27354) certifying that the DOE had demonstrated compliance with 40 CFR Part 191, Subparts B and C. Section 5.0 of this plan provides a more detailed description on the regulatory background and certification process.

The LWA also mandated that the DOE submit documentation of continued compliance to the EPA every five years from the initial date of waste receipt, as required by the LWA section 8(f). The certification and recertification criteria, as established in 40 CFR Part 194, mandate that the WIPP documentation must contain specific information pertaining to repository performance and site characterization. The effort associated with completing and submitting a CRA involves a wide range of disciplines and extensive involvement of the various entities that comprise the WIPP community. This effort requires the organization and control that define a project. Therefore, this undertaking is designated as the Recertification Project and will be planned and managed under accepted practices for project management in accordance with *A Guide to the Project Management Body of Knowledge* (Project Management Institute, 1996).

A Recertification Project Manager has been designated to coordinate this project. This responsibility consists of ensuring that the plan integrates activities of the project participants.

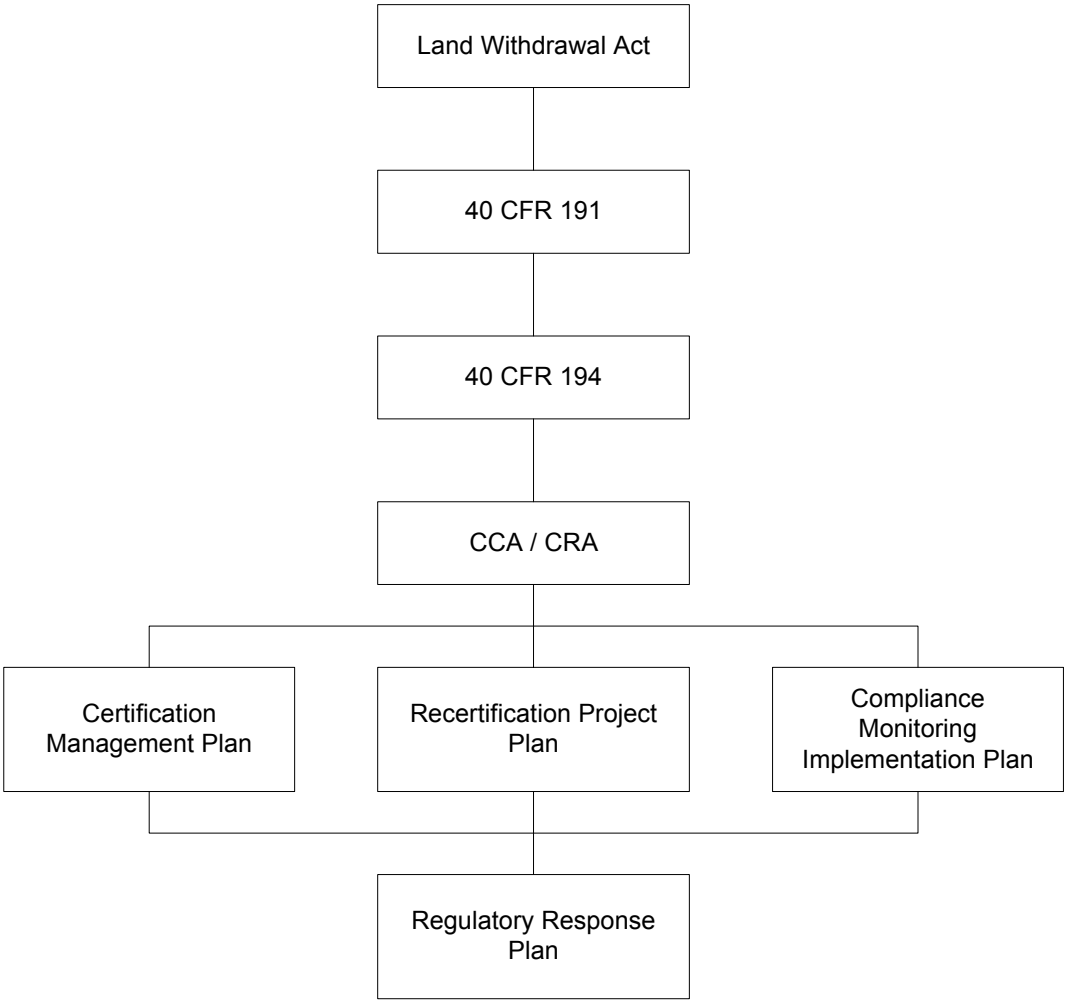

Figure 1 - Recertification Document Hierarchy

The intent of this project plan is to document a path forward that will successfully accomplish the project mission. Each of the project participants has an important role in the preparation and review of the CRA, as well as the responsibility of responding to additional information requested by the EPA during their review. Roles and specific duties are discussed in Section 2.1 of this plan.

The original compliance application discussed a broad range of WIPP-related activities under the 40 CFR Part 191, Subparts B and C, umbrella (such as the 20 years of WIPP site evaluation studies, active and passive institutional controls [PICs], and postoperational monitoring). The CRA will consist of appropriate updates within each category in which work has been performed. This information will include the most recent monitoring data, results of field and laboratory studies, and will include the incorporation of such data as appropriate, into the repository behavior modeling calculations.

A document hierarchy was created to show the relationship between the LWA, 40 CFR Parts 191 and 194, this plan, and other program documents. The document hierarchy is presented in Figure 1.

1.3 Enabling Objectives

To help guide planning, measurable project objectives have been established to accomplish the mission. These objectives follow, in order of importance:

1. Submit complete CRA no later than five years after receipt of waste (March 26, 1999) and every five years thereafter.

2. Provide the EPA with any new or revised information in the CRA that is not significantly different from the information in the most recent application. The minor nonsignificant changes are formally submitted to the EPA as "planned change notices."

3. Provide detailed information in the CRA of EPA-approved changes or modifications to the Certification.

4. Meet with the EPA as needed to discuss technical and regulatory issues related to recertification.

5. Align the monitoring and experimental programs preceding submittal of a CRA such that completed data collected through the data cutoff date are made available as appropriate, to the Scientific Advisor (SA) for use in completing PA calculations.

6. Project participants will provide timely status reports to the Project Manager and the Project Lead at scheduled Integrated Project Team meetings or as requested prior to submittal of the CRA to the EPA.

7. This Recertification Project Plan will be updated throughout the life-cycle of the project to maintain current descriptions of responsibilities, work scope, project strategies, and other planning elements.

8. After submittal of each CRA, the DOE and project participants will respond to requests for additional information made by the EPA according to DOE/WIPP 04-3296. This plan will be revised for future CRA submittals.

1.4 Project Assumptions

The assumptions for the Recertification Project are as follows:

- CAs and PAs will be used to support the CRA documentation as necessary. Factors necessary for conducting complete or partial assessments must be identified.
- Significant changes to the compliance certification will be submitted at least eleven months prior to the submittal date for a CRA.
- Format of the CRA will remain consistent with the CRA Style Guide (Washington Regulatory and Environmental Services [WRES], 2003).
- Technical Exchange meetings between the EPA and the DOE will provide input for major project decisions.
- The EPA will issue a recertification decision within six months of issuing a completeness decision.
- There will be no disruption in waste handling due to the recertification process.
- Monitoring and experimental data will be submitted to the SA on or before the desired date.
- The Project Manager will coordinate the execution of project activities.
- The Project Lead will make upper-level decisions regarding the project planning, strategy, scope, and changes thereof.
- The Integrated Project Team will prepare compliance documentation updating information sent in the most recent CRA. The DOE will make the final decision on what will be included.
- The DOE and other project participants will be prepared to provide additional information after the submittal of the CRA.

2.0 PROJECT CONTROL

2.1 Organizational Responsibilities

The Recertification Project has a unique work structure that involves participants from each organization. Each project participant is responsible for completing a portion of the work. The lead person from each of these organizations is responsible for ensuring that their portion is completed on time, and to the satisfaction of the CBFO. Combined, the lead personnel and multiple technical staff represent each organization and make up the Integrated Project Team, and also serve on the RRC. Summarized below are the responsibilities of each organization.

Project Lead – Person within the DOE who ensures recertification activities are completed and documentation is sufficient for submittal to the EPA; approves major changes to the Recertification Project; coordinates and manages post-submittal information transfer to the EPA via the RRC.

Recertification Project Manager – Integrates activities leading toward the submittal of the CRA.

Deputy Project Manager – Manages the project schedule, participates on the Integrated Project Team and participates in the RRC for post-CRA submittal activities.

CBFO – Several organizational units of CBFO will be involved in preparing, reviewing and other aspects of the CRA. It is the responsibility of the Project Lead to assure input of CBFO technical, regulatory, and legal staff is requested and subsequently included in the application submitted to the EPA.

SNL/SA – Performs sensitivity analyses, PA, CA, scientific investigation and analysis, and computer modeling; performs a technical review of the CRA; participates in the RRC for post-CRA submittal activities.

Management & Operating Contractor – Produces, collects, and assembles the CRA documentation; manages data collection and management activities related to the ten monitored parameters; provides SNL with the monitoring data and operational information for input into impact assessments and relevant performance assessment calculations; performs a technical review of the CRA; participates in the RRC for post-CRA submittal activities.

LANL – Conducts actinide chemistry experimental studies and TRU waste inventory updates; documents TRU waste inventory updates; provides TRU inventory data updates and analyses to SNL to support PA; coordinates and participates in DOE, EPA, TRU Waste Site visits; performs a technical review of the CRA; participates in the RRC for post-CRA submittal activities.

CTAC – Provides information on waste generator site compliance and audits, and quality assurance (QA) overview of project documentation; performs surveillances and audits of WIPP organizational and waste generator site QA programs as they relate to compliance certification; conducts peer reviews; performs a technical review of the CRA.

2.2 Team and Committee Responsibilities

Integrated Project Team – Consists of technical and programmatic leads with at least one representative from each of the participating WIPP organizations: the DOE (primarily CBFO, but depending on the topic, may include other DOE programmatic or legal staff, the MOC, SNL, LANL, and CTAC. Support contractors are encouraged to attend when agenda topics deal with items of importance to them. This team meets on a biweekly basis beginning near the "data cutoff date" and will be chaired by the Project Manager, with guidance from the Project Lead. This group will be responsible for updating the schedule, identifying and resolving pitfalls, and addressing other topics that may need clarification or a decision.

Recertification Response Committee – Consists of at least one representative of each of the project participants and is chaired by the Project Lead. The committee shall make decisions concerning compliance and strategy recommendations for post-submittal activities. Submittal of additional information is coordinated through this committee. A more specific definition is contained in DOE/WIPP 04-3296.

Figure 2 represents the project organization and reporting structure. It will be the responsibility of the Project Manager to ensure that involved organizations complete project activities in a timely manner. The Project Manager will also ensure that the project document information is timely, technically accurate, and meets applicable QA requirements. Activities for each organization are described in Section 3.0.

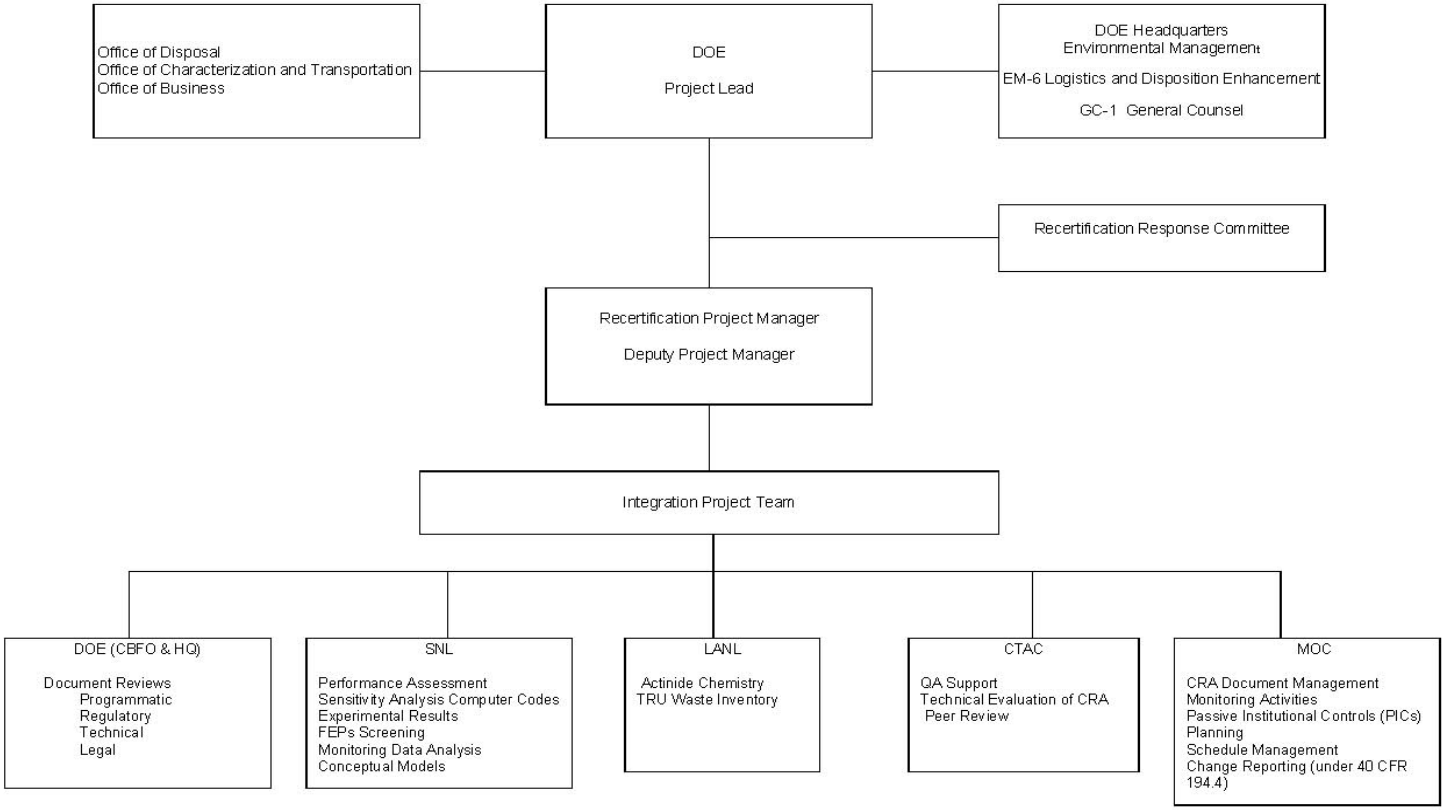

Figure 2. Project Organization

Since each organization has different responsibilities, the individual work schedules may vary. However, activities in one organization will have dependencies on those of the other organizations. Well-integrated relationships among the project participants must be formulated from the start and maintained throughout the life of the project. These activities have been planned by each of the organizations and incorporated into the integrated project schedule as summarized in Figure 3. The Recertification Deputy Project Manager will coordinate these activities to ensure successful results.

2.3 Change Control

Changes to the project strategy, project schedule or scope, or to this plan may be initiated by a member of the Integrated Project Team or by direction from DOE management. Changes are approved by the Project Lead with input from the appropriate level of participant's management. The Integrated Project Team may be involved in the early stages of the proposed change by reviewing justification and identifying impacts.

As for all WIPP projects, change control (i.e., scope, schedule, and cost) for the Recertification Project will be managed consistent with the *Waste Isolation Pilot Plant Project Control System Description* (DOE/WIPP 04-3300).

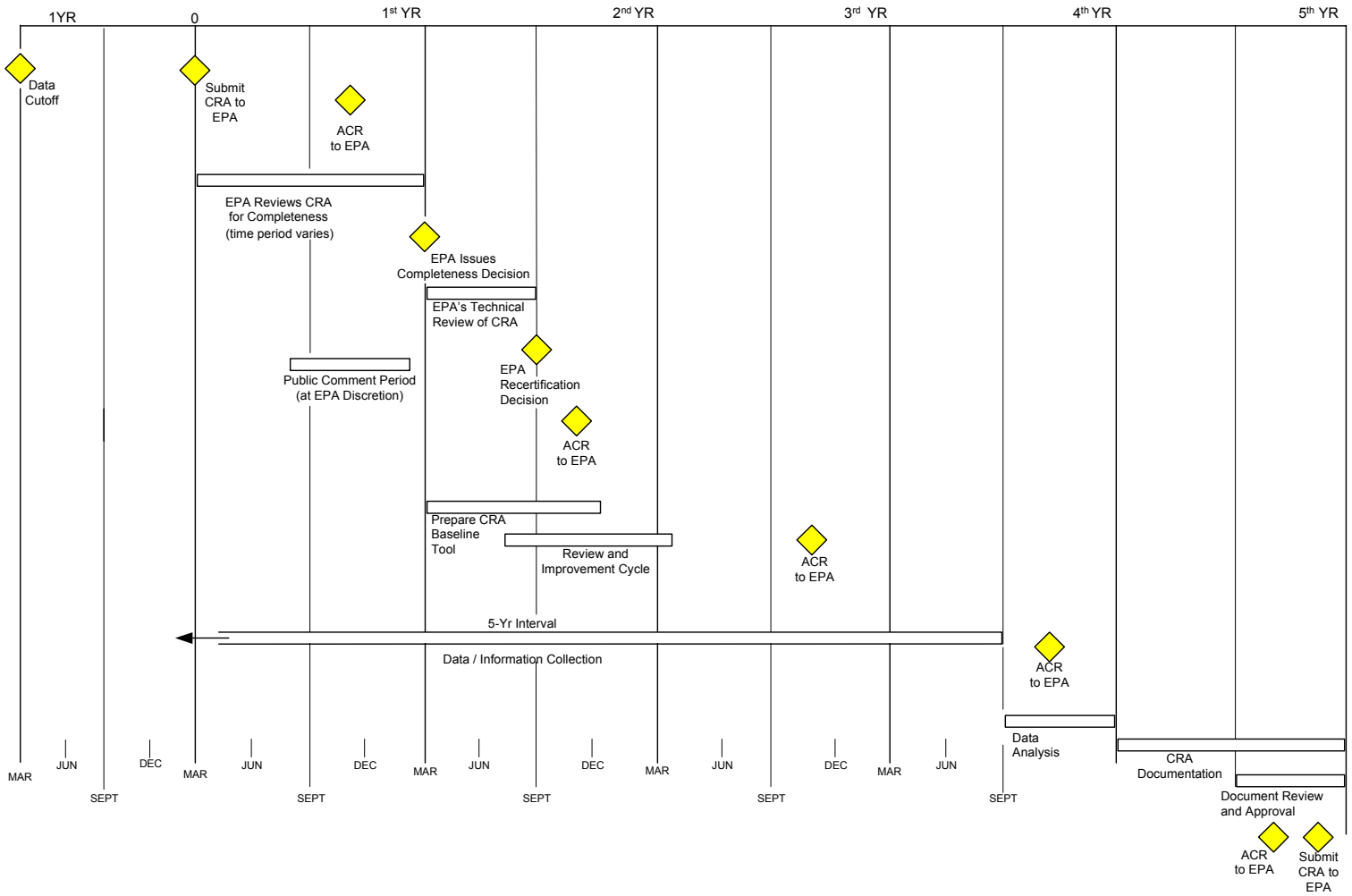

Figure 3 - Five-Year Rolling Recertification Timeline

2.4 Project Status and Progress Reporting

The status of the Recertification Project will be provided to senior CBFO management and regulatory staff of CBFO and its contractors in a weekly meeting. A short written report will also be prepared to support that meeting.

During the active production of the CRA, periodic (typically biweekly) meetings of the Integrated Project Team will be held. During these meetings, each project participant will be expected to provide status of schedule items under their cognizance. In addition, the members of the team will discuss issues and document resolutions. In cases of specific, more complex issues, focus group meetings will be used to facilitate issue resolution.

Cost and schedule status of project participants is updated monthly at the WIPP Integrated Project Status Meeting.

3.0 PROJECT SCOPE

The scope of the Recertification Project is derived from the certification criteria in 40 CFR Part 194, and is consistent with the EPA's December 2000 *Guidance to the U.S. Department of Energy on Preparation for Recertification of the WIPP with 40 CFR Parts 191 and 194*. This range of work includes documenting the DOE activities in the areas of containment requirements, assurance requirements, individual and groundwater protection requirements, and processes involved in justifying and validating such documentation (e.g., QA records, expert elicitations, or incorporation of the peer review process). The duration of work is on a five-year cyclic schedule, as depicted in Figure 3. The project scope is sufficient to include the preparation and submittal of the CRA and provision of additional information requests from the EPA, and concludes when the EPA issues a recertification decision.

3.1 Scope of Work

The WIPP work breakdown structure (WBS) includes the scope of the recertification effort and other supporting activities. The WBS currently includes major activities that recur on a five-year cycle. The recertification WBS is maintained in accordance with DOE/WIPP 04-3300. At the fourth, fifth, and sixth levels of the WBS, recertification scope includes:

WBS Element Number	Activity Descriptor
1.2.3.01	Recertification
1.2.3.01.01	Compliance Recertification
1.2.3.01.01.01	Planning and Scheduling for Recertification
1.2.3.01.01.02	Qualification of PA Capability for Recertification
1.2.3.01.01.03	Data Compilation for Recertification
1.2.3.01.01.04	Data Analysis for Recertification
1.2.3.01.01.05	CRA Document Preparation
1.2.3.01.01.06	CRA Submittal and Publication

WBS Element Number	Activity Descriptor
1.2.3.01.01.07	CRA Post Submittal Activities
1.2.3.03	Change Requests
1.2.3.03.02	Performance Assessment
1.2.3.03.03	Repository Investigations
1.2.3.03.04	Repository Performance Impact Assessments

The current compliance baseline consists of the 1996 CCA, the 2004 CRA, and relevant materials in EPA Air Dockets A-93-02 and A-98-49. Docket A-93-02 contains information the EPA reviewed and considered in making its decision to certify the DOE had met the compliance criteria established by EPA in 40 CFR Part 194 and the disposal regulations set by the EPA in 40 CFR Part 191, Subparts B and C. Docket A-98-49 contains new information that EPA reviews to determine whether the certification should be modified, suspended, or revoked. This includes information such as the EPA CARDs, TSDs, and the EPA certification decision (i.e., Final Rule).

The project-defined regulatory compliance categories (adopted from 40 CFR Parts 191 and 194) are detailed in Table 1.

Table 1. Compliance Activities, Regulatory Drivers, and Responsible Organization

Compliance Area*	Applicable Regulatory Driver(s)*	Organization
Monitoring - Environmental, Land Management, Groundwater, Geomechanical, Geotechnical, and Subsidence	§**191.14(b)** and §194.42	MOC
PICs - Permanent Markers, Awareness Triggers, Records and Archiving	§**191.14(c) and Final Rule**	MOC
Natural Resource Tracking (Delaware Basin Surveillance)	§**191.14(e)** and §194.42	MOC
Waste Characteristics and National TRU Programs Interface	§194.24(a)	LANL
WIPP Waste Information System	§**191.14(b)** and §194.42	MOC
Engineered Barriers	§**191.14(d)** and §194.44	SNL
WIPP Experimentation, Testing, Analyses and Calculations	§194.15(a)(3)	SNL
Performance Assessment	§**191.13**, §194.25, §§194.32-34	SNL
Compliance Assessments	§**191.15,** §**191.24**, §§194.25, and 194.31	SNL
Computer Codes/Modeling	§§194.22 and 23	SNL

Table 1. Compliance Activities, Regulatory Drivers, and Responsible Organization		
Actinide Chemistry Experimental Results	§194.15(a)(3)	LANL
Generator Site Audit information	§194.8, §194.22, and §194.24	CTAC
Audit and Verification of Quality Assurance Programs	§194.22	CTAC/CBFO
Technical Evaluation	§194.15	CTAC/CBFO
Waste Inventory Update	§194.15 and 194.24 (a) and (b)	LANL

* Regulatory drivers from 40 CFR Part 191 and the associated assurance requirement functional title are shown in bold text.

3.1.1 Scope of Work - SNL

For the 2004 CRA, SNL provided the Recertification Project Manager with resources to coordinate activities leading to the successful submittal of a recertification application. The SNL project elements are described below.

- Performance Assessment - The SA will maintain the computing systems necessary to conduct a full PA. PA conducted for recertification will be described in the recertification application. Calculations will be conducted according to the SNL QA program.

- Compliance Assessment - The SNL recertification project team will conduct a compliance assessment in accordance with 40 CFR §§191.15 and 191.24. Calculations will be conducted under appropriate QA controls.

- Performance Assessment Baseline Review - The SNL recertification project team will conduct a review of the performance assessment baseline to assure that changes since the previous certification have been identified and included in performance calculations, as necessary. This includes evaluation of baseline features, events, and processes (FEPs), WIPP conceptual models, performance scenarios, and identification of data requirements.

- Experimental Programs - Experimental results that support the WIPP Long-term Compliance Program will be documented and included as appropriate in the recertification application. This includes experimental work relating to engineered barriers, rock mechanics, WIPP repository chemistry, regional hydrology, and other experimental areas that relate to WIPP conceptual models represented in the PA.

- Provide written documentation of changes to the PA baseline, performance and compliance assessment calculations, and experimental results. This documentation will include the update of appropriate chapters and appendices of

the recertification application. Documentation will be prepared under the SNL QA controls for document preparation and review.

3.1.2 Scope of Work - MOC

The MOC project team is made up of operational staff plus the regulatory staff. Each project member has been delegated a portion of the work which must be completed when compiling the recertification documentation. The scope of work includes the following elements:

- Manage the integrated Recertification Project schedule, monitor progress, and adjust the schedule baseline so as to meet the project milestone of a timely application submittal.

- Research and track significant (planned and unplanned) and nonsignificant changes to the compliance baseline and report such changes based on the requirements of 40 CFR §§194.4(b)(3) and 194.4(b)(4). The ACR summarizes nonsignificant changes occurring between July 1 and June 30 and is submitted to the EPA each November. Details of changes will be provided in the appropriate sections of the next CRA.

- Maintain the Compliance Recertification Electronic Library (CREL). This integrated compliance tracking system shall consist of records of change analyses, change considerations, technical support information and justification for changes, decisions rendered by the EPA, correspondence , memos, meeting minutes, and other 40 CFR Part 191 compliance-related material.

- Maintain program plans and other documentation used to assure compliance with the Assurance Requirements and a subset of the Containment Requirements.

- Collect disposal system monitoring data that will be provided to the SA. Monitoring programs include Geotechnical, Groundwater, Delaware Basin Drilling Surveillance, Emplaced Waste Tracking, and Subsidence.

- Gather documentation on related compliance activities.

- Manage the technical editing, physical production, and distribution of the paper and electronic versions of the compliance application. This includes the maintenance of the CRA Style Guide (WRES, 2003), in accordance with format and content guidance from the EPA.

The MOC Recertification Strategy and Program Plan (Washington TRU Solutions LLC [WTS], 2001) will be revised prior to each recertification to reflect up-to-date understanding of the actions necessary to support each subsequent recertification.

3.1.3 Scope of Work - CTAC

The CTAC project team is made up of personnel who have experience in WIPP QA activities and waste generator site characterization processes. CTAC will provide updated QA/quality control information related to WIPP and waste generator site activities. CTAC will also ensure that the CRA documentation meets applicable QA requirements, as well as providing technical reviews. Each project member has been delegated a portion of the work that must be completed when compiling the recertification documentation.

3.1.4 Scope of Work - LANL

LANL is responsible for updating the TRU waste inventory data that is submitted with each recertification application. Since these data are used in the application and in PA calculations, the PA data requirements are specified by the SA and all data are derived and documented by LANL in accordance with applicable regulatory QA requirements under the LANL-CO QA program. Specifically, LANL personnel will collect, verify, and validate the TRU Waste Inventory that complies with 40 CFR §194.24, "Waste Characterization." Information will be reported in analyses. Results from these analyses will be used to update and communicate information to the Project Lead on a regular basis.

LANL is also responsible for the development and execution of an actinide experimental program that addresses issues relating to the compliance demonstration. All actinide experimental activities are coordinated by the CBFO to ensure the activities and results are integrated with the PA, are under the DOE QA program and all data and results that are to be used in a compliance recertification meet compliance determination QA requirements. LANL staff scientists from the Actinide Chemistry program will be involved in discussions regarding WIPP Actinide Chemistry issues. Experimental results that support the WIPP Long-term Compliance Program will be documented and included, as appropriate, in the recertification application. LANL Actinide Chemistry activities will be conducted under the LANL-CO QA program.

3.2 Project Schedule

Project activities and milestones are identified and tracked in a WIPP Recertification Project schedule. This schedule integrates the activities of project participants and reflects both recurring and one-time events. A complete version of this schedule is maintained by the MOC. An abbreviated schedule that identifies the major activities and milestones that occur in every five-year recertification cycle is shown in Figure 3.

The Deputy Project Manager will be responsible for managing the integrated Recertification Project schedule. The MOC provides a scheduler to integrate the activities of project participants into one integrated schedule. Based on feedback received during periodic meetings of the Integrated Project Team, the schedule will be modified to accommodate schedule delays only after impacted project participants agree that appropriate actions have been made to correct the delay.

The SA will evaluate the cumulative effect of EPA-approved changes and the new monitoring data at the specified data cut-off date. After the Data Cutoff Date, no further planned changes or monitoring data will be considered under the realm of recertification and disposal-system performance (SNL 2001).

As changes occur throughout the operational life of WIPP, PA and CA calculations based upon calculated impacts may be necessary to demonstrate continued compliance. The CBFO, with input from the SA, will determine the need to perform revised PA and/or CA calculations. If assessments are performed, documentation will be completed by SNL and submitted to the MOC for input into the CRA. In the event the PA calculations are not needed, detailed justification summarizing the decision basis and the net effect of the changes to the Compliance Certification will be provided by SNL for inclusion in the CRA documentation.

4.0 PROJECT STRATEGY

The Recertification Project strategy incorporates the ongoing compliance activities performed by the project participants, as well as developing a CRA that contains only the information necessary for making a compliance determination. This section describes the strategy specific to the recertification effort. Ongoing compliance activities that contribute to the Recertification Project are discussed in Section 5.0. Described below are strategies related to document layout and approach, and long-term impact assessments.

4.1 Documentation Strategy

In putting together the appropriate documentation for the CRA, the Integrated Project Team will evaluate those portions of the most recent application for areas in which information has changed through the EPA change-approval process (as described in Section 5.0). Applicable changes occurring in the last five years are captured in the CRA. Those changes can come from modifications, approved changes, ACRs, new/added data, and revised determinations or conclusions resulting from the analysis of changed information. The ACR documents nonsignificant changes.

Project participants will evaluate each of the compliance areas listed in Table 1 for changes. Areas of change in the compliance baseline will be identified and the appropriate project participants shall revise sections, as needed. This information will be reviewed and approved by the Integrated Project Team.

Formatting of the application will follow a modified redline-strikeout text editing method described in the CRA Style Guide (WRES, 2003). CRA production will be managed to a detailed schedule that will define draft documentation preparation, inter-organizational review, external reviews, and finally, completion and submittal to the EPA. Inter-organizational reviews will be conducted with designated lead reviewers/approvers from each of the WIPP participant organizations and support from document authors and appropriate technical experts. DOE Headquarters programmatic staff may also be involved in the initial document reviews. Once a final draft of the application is

available, it will be provided to appropriate management in CBFO and DOE Headquarters (Environmental Management and the Office of General Counsel). Prior to submittal to the EPA Administrator, briefings will be held with the DOE Secretary and appropriate staff, as necessary.

4.2 "Planned Change" Requests

Title 40 CFR §194.4 prescribes a process for reporting to the EPA changes to information in the most recent compliance application. Nonsignificant planned changes are reported to the EPA in the ACR. Planned changes that the EPA deems nonsignificant will be either approved or disapproved by the EPA. Nonsignificant changes do not require rulemaking or judicial review. Significant changes that must be reported may be planned or unplanned. Significant changes cannot be implemented by the DOE until the EPA issues a modification to the certification. Any modification to the certification will be conducted through rulemaking (§§194.65 and 194.66). Because the rulemaking process is lengthy and includes a formal public notice and comment period prior to issuance of a final rule, the DOE will work closely with the EPA so that the timing of submittal(s) will result in the most effective review process. Strategically, this may involve only one submittal every five years of several planned changes in a "bundle." EPA cannot consider a planned change notice while they are evaluating the CRA. More details on this process are discussed in DOE/CBFO 99-2296 and the *Waste Isolation Pilot Plant Reporting Implementation Plan* (DOE/WIPP 99-2286).

4.3 Long-Term Impact Assessment Strategy

Changes to information in the certified baseline will be assessed by the scientific advisor for impacts on assumptions or conceptual models, as well as impact on the long-term performance of the disposal system. A logical, step-wise sequence will be followed when assessing these changes as follows:

1. Create and use a comprehensive list of changes since the most recent certification ruling.

2. Examine FEPs that describe the disposal system (site, facility, and waste characteristics); if the previous assumptions remain valid, and the screening arguments remain unchanged, then the assessment will move on to the next step.

3. Evaluate scenarios as appropriate to determine if identified changes (from steps 1 and 2 above) affect baseline performance scenarios. Changes to the conceptual models will require a peer review prior to use in the PA calculations. Peer reviews will be performed as dictated by 40 CFR §194.27.

4. Assess the extent that the conceptual models, codes, and input parameters remain valid; change will be examined for its potential impact on repository performance. Decisions related to changing conceptual models, codes, and input parameters will be justified with proper documentation. If steps 2 through 4

are completed and documented without any changes to the original assumptions, values, or models, then the assessment is considered to be complete. If not, the process moves to step 5.

5. Conduct PA and/or CA, as necessary. The decision to proceed down this path is dictated by the first four steps. Any of the previous steps could trigger the need to perform an impact assessment. If there are changes which were not accounted for in the compliance baseline, they must be screened for their potential to impact the long-term performance of the repository. This impact screening will determine if a CA or PA will be needed for the Recertification Project.

The SNL Recertification Action Plan (ERMS #521710) will be revised prior to each recertification to reflect up-to-date understanding of the actions necessary to support each subsequent recertification.

4.4 Maintenance and Use of the Performance Assessment Capability

The CBFO will maintain the capability to perform PA and CA calculations throughout the WIPP operational life. It may be appropriate to conduct new compliance analyses using the PA modeling system if newly acquired data or information indicate that changes are needed in current conceptual, mathematical, or computational models or parameter values. New calculations may also be needed if changes are proposed for the design or operation of the repository or for the types of waste to be emplaced in the repository. As the SA, SNL makes recommendations regarding the need to conduct PA calculations or modify the modeling approach. The CBFO will be responsible for determining when it is appropriate to conduct new analyses using PA, or to revise repository-related models.

5.0 COMPLIANCE AND RELATED PROCESSES

The process of maintaining compliance with Part 191, Subparts B and C, is ongoing throughout the WIPP Project. Detailed discussion on activities related to managing and maintaining certification, and on compliance change reporting can be found in DOE/CBFO 99-2296 and DOE/WIPP 99-2286. Specifically described in this plan are the iterative processes of recertifying WIPP's compliance with 40 CFR Part 191, Subparts B and C.

5.1 Regulatory Framework

The WIPP five-year recertification requirement is mandated by the LWA. Section 8(f) of the LWA provides:

> (1) *Not later than 5 years after the initial receipt of transuranic waste for disposal at WIPP (March 26, 1999), and every 5 years thereafter until the end of the decommissioning phase, the Secretary shall submit to the Administrator and the State*

documentation of continued compliance with the final disposal regulations.

The EPA has provided criteria for fulfilling this requirement. Title 40 CFR §194.64, "Documentation of Continued Compliance," establishes the process for recertification (the EPA's review of the existing Certification). This process stipulates a 30-day public comment period prior to the Administrator's decision on whether to recertify the WIPP facility based on continued compliance with the final disposal regulations. Consistent with the LWA, the process for recertification excludes rulemaking or judicial review.

EPA regulation 40 CFR §194.15, "Content of Compliance Re-certification Application(s)," provides guidance on the content of applications for compliance recertification. The rule provides as follows:

(a) In submitting documentation of continued compliance pursuant to section 8(f) of the WIPP LWA, the previous compliance application shall be updated to provide sufficient information for the Administrator to determine whether or not the WIPP continues to be in compliance with the disposal regulations. Updated documentation shall include:

(1) All additional geologic, geophysical, geochemical, hydrologic, and meteorological information;

(2) All additional monitoring data, analyses and results;

(3) All additional analyses and results of laboratory experiments conducted by the Department or its contractors as part of the WIPP program;

(4) An identification of any activities or assumptions that deviate from the most recent compliance application;

(5) A description of all waste emplaced in the disposal system since the most recent compliance certification or re-certification application. Such description shall consist of a description of the waste characteristics and waste components identified in §194.24(b)(1) and §194.24(b)(2);

(6) Any significant information not previously included in a compliance certification or re-certification application related to whether the disposal system continues to be in compliance with the disposal regulations; and

(7) Any additional information requested by the Administrator or the Administrator's authorized representative.

> *(b) To the extent that information required for a re-certification of compliance remains valid and has been submitted in previous certification or re-certification application(s), such information need not be duplicated in subsequent applications; such information may be summarized and referenced.*

In promulgating 40 CFR Part 194, the EPA recognized the possibility that the disposal activities or the disposal system could change during the operations period. These kinds of changes require an alternative certification process. The EPA provides for changes that are subject to rulemaking ". . . when significant information contained in the most recent compliance application were no longer to remain true" (61 FR 5224-5245).

The preamble to the Part 194 Final Rulemaking explains that "Any modifications and revocations issued by the EPA would affect the Certification issued pursuant to section 8(d)(1) of the WIPP LWA and must be conducted by rulemaking under section 553 of the Administrative Procedure Act" (61 FR 5224-5245). Title 40 CFR §194.65, "Notice of Proposed Rulemaking for Modification or Revocation," and 194.66, "Final Rule for Modification or Revocation," establish the process for changes based on rulemaking.

This plan discusses in general, the aspects of maintaining compliance under the 40 CFR §194.4 criteria. For detailed information on planned and unplanned change reporting, see DOE/CBFO 99-2296.

5.2 The Recertification Process

The process of demonstrating continued compliance on a periodic basis consists of the development and submittal of compliance documentation followed by several additional steps, including the implementation of compliance activities and the evaluation and reporting of the results obtained through implementation of the compliance activities. These steps will repeat on a continuing basis, at five-year intervals.

The routine recertification process is shown in Figure 4. EPA certification of WIPP initiates each recertification cycle. The certification process was initiated through the DOE's submittal of the initial CCA (DOE/CAO 1996-2184) to the EPA. The EPA's initial certification was published on May 18, 1998, and the initial receipt of waste was on March 26, 1999.

When nonsignificant changes occur, the DOE will report on project activities at the intervals specified in 40 CFR §194.4(b)(4). At a minimum, these will be submitted to the EPA Office of Radiation and Indoor Air in an ACR. Copies of these reports will also be provided to the WIPP program office within the Assistant Secretary for Environmental Management, DOE Headquarters, Office of Environmental Management (EM-23). Subsequent recertification actions will be initiated through the development and submittal of the CRA, consistent with the EPA's criteria in 40 CFR §194.15. After the EPA receives the CRA, they will issue a *Federal Register* Notice opening a public

comment period. Public meetings may, at the EPA's discretion, also be held. The *Federal Register* Notice will specify the duration of the public comment period. As prescribed in §194.64(c), this period will be at least thirty days. The EPA will review the CRA and determine if more information is required. Once the EPA determines that the information is complete, they will propose a decision on whether the project continues to comply. Shown in Figure 4 is the five-year repetitive process of WIPP compliance recertification.

Once the public commenting period has expired and the EPA has completed their review, they will publish a decision in the *Federal Register*. If the determination is favorable, the EPA will recertify WIPP and the process returns to the ongoing implementation of the compliance program. As specified by section 8(f)(2) of the LWA and referred to in 40 CFR §194.64, this process prohibits rulemaking and judicial review.

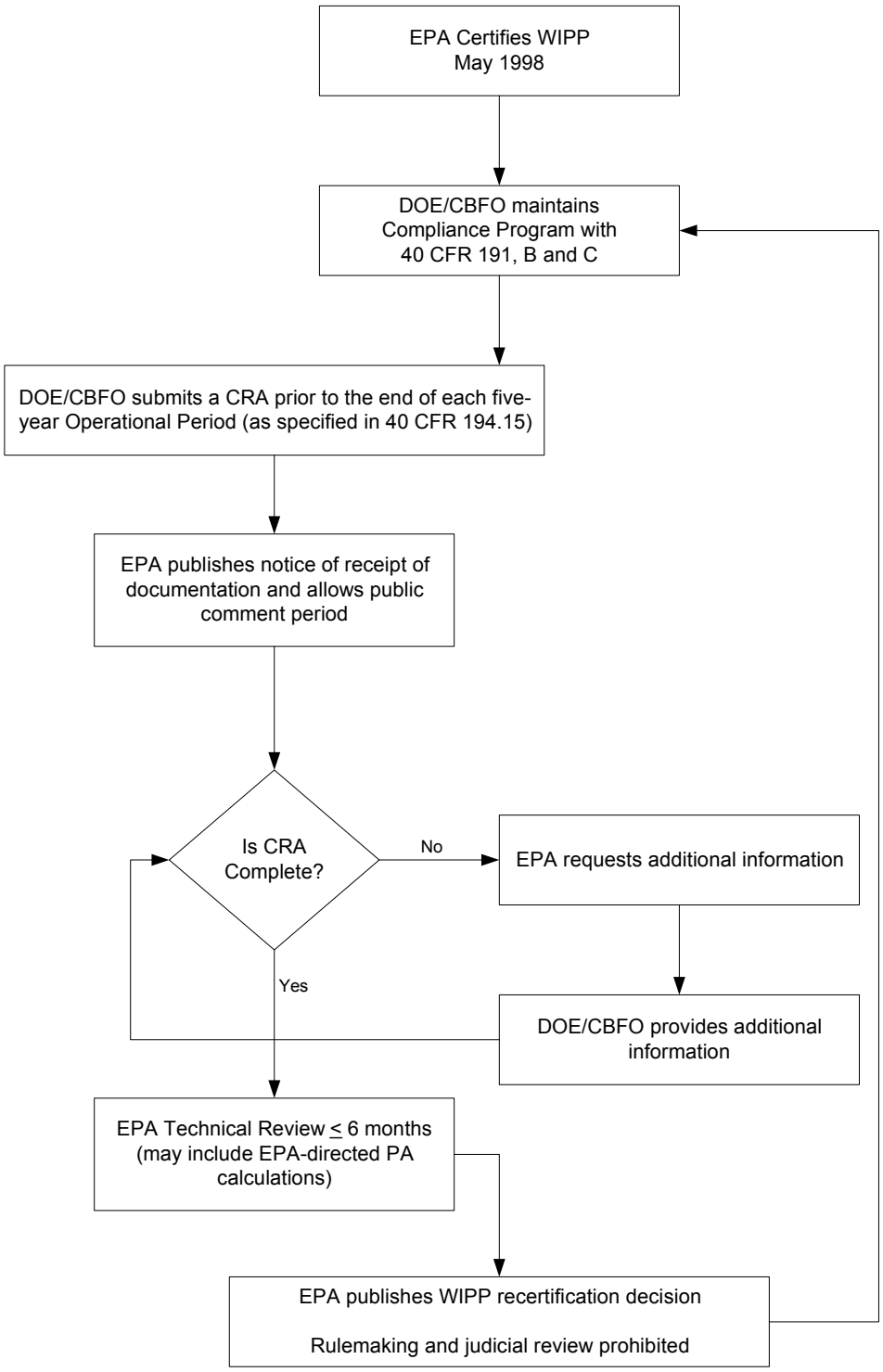

Figure 4. WIPP Recertification Process

5.3 Compliance Program Information Flow

An important objective of the compliance program is to ensure the effective dissemination and integration of information relevant to compliance activities throughout the project and externally. Compliance information will generally be generated through data acquisition and data assessment functions. The data acquisition function is primarily the responsibility of the MOC. The data assessment function is generally performed by SNL.

Compliance information flow within the project will be managed to ensure that important results are communicated to the appropriate individuals and groups. The Project Lead has been designated by the DOE as the contact for reporting of the results of compliance program activities. This includes coordination between the offices within the CBFO and the sharing of information with other DOE offices, the EPA, other government entities, and the public.

The CREL is a document management system. The CREL provides a centralized on-line repository of compliance-related electronic documents that can be easily accessed using a web-based browser interface. The system is designed to expedite the file sharing and document creation process. Security is provided by data encryption and password authorization. It is a very versatile system that can handle a wide range of compatible file types. Configuration control is performed by allowing varying access levels and permissions to users, and by logging access to documents by time, date, user and type of access. For QA, the system also logs and tracks revisions to documents as they are made.

6.0 QUALITY ASSURANCE

The quality of the work performed under the compliance program is controlled by the application of the CBFO *Quality Assurance Program Document* (QAPD) (DOE/CBFO 94-1012) and existing QA procedures employed by each project participant. This QA program is implemented to monitor progress in the performance of the compliance activities. The QA program provides for the routine verification of compliance program activities. These QA activities ensure that the CBFO meets the commitments made in the CCA (DOE/CAO 1996-2184), the first CRA (*Title 40 CFR Part 191 Subparts B and C Compliance Recertification Application 2004* [DOE/WIPP 2004-3231]) and subsequent CRAs. If the verification work identifies deficiencies, corrective actions will be implemented per the applicable WIPP-participant procedures.

Another QA process with significant activity within the project is the document review process. Consistent with the CBFO QAPD, the CRA must be reviewed for adequacy, correctness and completeness prior to approval and issuance. This process also involves documentation of review comments and subsequent resolution of comments. There are two aspects of the document review process. The first aspect involves individual participants in the preparation of CRA sections and related documents. The second aspect involves participants from each of the project participants providing

comments that are resolved in a consensus manner. Documentation of the final comments and their resolution constitute the final QA documentation.

7.0 STAKEHOLDER INVOLVEMENT

The participation of non-WIPP related persons or organizations will be encouraged throughout the entire project. The EPA is responsible for stakeholder interactions related to the CRA. Interactions include, but are not limited to organizing and conducting public meetings; preparing and distributing fact sheets and other similar materials; and requesting, collecting, and responding to public comments. WIPP participant involvement in this process would be at the request of the EPA.

8.0 REFERENCES

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